



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,836	12/19/2001	Phillip G. Wapner	AFB00612	5454

7590

09/17/2004

Stanton E. Collier

ESC/JAZ

40 Wright St.

Hanscom AFB, MA 01731-2903

EXAMINER

ROSSI, JESSICA

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/024,836	Applicant(s) WAPNER ET AL.	
	Examiner Jessica L. Rossi	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-46 is/are pending in the application.
4a) Of the above claim(s) 28-34, 39 and 43-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 35-38 and 40-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species A (appears to be claims 28-34), drawn to adding material to the core (= augmented mandrel; p. 18, 2nd paragraph).

Subspecies Ai (appears to be claim 33), drawn to spraying material onto the core by a nozzle or tube.

Subspecies Aii (appears to be claim 34), drawn to selectively depositing material onto the core by using a mask.

Species B (appears to be claims 35-42), drawn to removing material from the core (p. 20, 3rd paragraph).

*note: upon election of species B, a further subspecies election is required.

subspecies Bi (appears to be claims 37-38), drawn to removing material from the core by a non-contact technique.

subspecies Bii (appears to be claim 39), drawn to removing material from the core by a contact technique.

Species C (appears to be claims 43-46), drawn to moving material on the core (p. 22, 3rd paragraph).

*note: upon election of species C, a further subspecies election is required.

subspecies Ci (appears to be claim 45), drawn to moving material on the core using embossing or crimping.

Art Unit: 1733

subspecies Cii (appears to be claim 46), drawn to moving material on the core using a hot wire or heat source in combination with a tool.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 35 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mr. Stover on 9/11/03 a provisional election was made with traverse to prosecute the invention of Species B and subspecies Bi, claims 35-38 and 40-42. Affirmation of this election must be made by applicant in replying to this Office action.

Art Unit: 1733

Claims 28-34,39, and 43-46 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

4. Note parent application 09/274,820 has since issued as US PAT 6,458,231 and Applicant is required to amend the specification accordingly on p. 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 35 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Wapner et al. (US 6059001).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

Art Unit: 1733

inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

With respect to claim 35, Wapner is directed to a method of forming a microtube device (abstract). The reference teaches forming a core 12 consisting of at least one fiber (column 2, lines 48-50; column 3, lines 21-23) and placing the fiber core in a multi-axis fabrication device 36 capable of micron or sub-micron positioning (column 1, lines 34-37; column 5, line 50 – column 6, line 11; column 6, lines 22-38). The reference teaches removing material selectively from the fiber core surface in a continuous or non-continuous manner in at least one pre-determined position on the periphery of the core to a predetermined depth in order to produce a complex reduced mandrel (column 4, lines 33-45), coating the complex reduced mandrel with at least one material to form at least one layer thereon yielding a coated complex reduced mandrel (column 5, lines 4-10), and removing the complex reduced mandrel from the coating with a predetermined process to leave the coating forming a microtube device (column 5, lines 30-31).

Regarding claim 37, the reference teaches removing material from the fiber core using a non-contact technique such as a focused beam of energetic particles, ions, or laser radiation (column 4, lines 38-40).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1733

8. Claims 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wapner et al. as applied to claim 35 above and further in view of Witzke et al. (US 5188776).

Regarding claim 36, selection of dimensions for the fiber would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to use a fiber having a cross-sectional dimension that falls within Applicant's claimed range because such is known in the microtube art, as taught by Witzke (abstract).

9. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wapner et al. as applied to claim 37 above.

Regarding claim 38, it would have been obvious to the skilled artisan at the time the invention was made to use a mask when selectively removing the material from the fiber core because such is a notoriously well known and conventional technique when selectively removing material from a surface in a variety of arts, wherein such eliminates the need for precisely maneuvering the removal tool since the mask is there to ensure that only those desired areas undergo material removal.

10. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wapner et al. as applied to claim 35 above and further in view of Keith et al. (US 5888436).

Regarding claim 40, Wapner is silent as to depositing a coating on the fiber core before removing material. It is known in the art to form a microtube by depositing a coating on fibers and then removing material from the surface of the fibers wherein the coating provides structural integrity, as taught by Keith (column 3, lines 54-56; column 4, lines 24-27 and 47-49).

Therefore, it would have been obvious to the skilled artisan at the time the invention was made to

Art Unit: 1733

deposit a coating on the fiber core of Wapner before removing material because such is known in the art, as taught by Keith, wherein the coating provides structural integrity.

Regarding claim 41, the type of coating would have been within purview of the skilled artisan depending on the desired properties thereof. However, the skilled artisan would have appreciated a photoresist being well known and conventional. As for employing a mask during material removal, please refer to the rejection of claim 38 set forth above.

Regarding claim 42, Keith teaches removing the coating by etching wherein the skilled artisan would have readily appreciated it being well known and conventional to etch via solvation or plasma treatment; it being noted that Wapner teaches solvation being a known removal technique (column 5, lines 30-31).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 35 and 37-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,458,231 in view of Wapner et al.

Art Unit: 1733

With respect to claim 35, claim 7 of US PAT '231 teaches all the limitations except placing the fiber core in a multi-axis fabrication device capable of micron and sub-micron positioning. It would have been obvious to place the fiber core in such a device because such is known in the art, as taught by Wapner (see paragraph 6 above for complete discussion), wherein this allows for easy processing of the fiber core.

Regarding claim 37, claim 7 of US PAT '231 teaches all the limitations except Applicant's claimed removal techniques. It would have been obvious to use such techniques because such are known in the art, as taught by Wapner (see paragraph 6 above).

Regarding claim 38, it would have been obvious to the skilled artisan at the time the invention was made to use a mask when selectively removing the material from the fiber core because such is a notoriously well known and conventional technique when selectively removing material from a surface in a variety of arts, wherein such eliminates the need for precisely maneuvering the removal tool since the mask is there to ensure that only those desired areas undergo material removal.

13. Claim 36 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,458,231 in view of Witzke et al.

Regarding claim 36, claim 7 of US PAT '231 teaches all the limitations except the dimensions of the fiber core. Selection of dimensions for the fiber would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to use a fiber having a cross-section dimensions that fall within Applicant's claimed range because such is known in the microtube art, as taught by Witzke (see paragraph 8 above).

Art Unit: 1733

14. Claims 40-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 7 of U.S. Patent No. 6,458,231 in view of Keith et al.

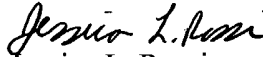
Regarding claims 40-42, claim 7 of US PAT '231 is silent as to these limitations. Please refer to paragraph 10 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jessica L. Rossi
Patent Examiner
Art Unit 1733